3.2. Selecting a representation

Overview

There are many ways to represent an information object. This module examines some of the issues in choosing how to represent information objects. Our operating assumption is that there is no one right and perfect representation. But are some representations better than others, at least for specific users?

We organize a collection of information objects or resources for users as a way of helping to connect users with appropriate information. In selecting a representation, the two things we must address are: the information objects themselves that we want to represent, and the users for whom we are organizing the objects. These then become the drivers for determining an appropriate representation of the object.

Information objects and attributes

An information object has any number of characteristics or features by which it can be described. The first driver for representation is the object itself. We examine the object to identify its attributes. An attribute is simply a characteristics or feature of an entity. As a simple example, pick up your textbook and look at it. Try to describe some of the physical features of the object.

For example, the physical format has attributes (characteristics) related to:

- Color
- Binding (hardcover or paperback)
- Size (height, width, thickness)

We can go further in describing the physical object in terms of attributes related to:

- Name (e.g. A title)
- Creator (e.g., an author)
- Relationship to other objects (see "Library and Information Science Text Series" on back cover)

So far, we haven't even opened the book—these characteristics of the object are found on the cover of the object.
Once we open the book, we can see other attributes such as:

- Date information (e.g., date of publication)
- Publisher's name
- Publication place
- Table of contents
- Back-of-the-book index
- Glossary
- Number of pages

These attributes (and others) all relate to the physical object. We can say they are intrinsic to the object because all are located in or on the object. To begin thinking about how to representing an object, we start by examining the object and identifying its attributes.

**Users and their need for information about the object**

We listed a number of attributes of the object that we can use in our representation. The question is: which of these attributes are important to users? While identifying the attributes of an information object is relatively easy, identifying what users want to know about the object is more difficult because it requires getting to know the users themselves.

**Project Alert!** The reason for section 1.3. of the IOP is to get you thinking about what users need to know about the objects for which you are creating the organization system. The user questions in 1.3 begin to point to the attributes of the objects you will record data about in your representations. In creating a real-world organization system you would conduct a thorough assessment of your users and their needs. But for the project, the user questions in 1.3 provide a minimal foundation for a user-based approach to designing your organization system.

Different user groups may need similar and/or different information about information objects. You provided some information in the student profile survey you filled out at the beginning of the course. In that survey, we asked a number of questions including this one:

List the three most important pieces of information about a book (or any other format of information such as sound recordings, Internet resources, computer files, journals, etc.) that you—as a user—are interested in when you search for information.

The responses to this question each semester always point to the varied requirements different users with different tasks bring to the representation scheme for information objects. Typical responses include:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Perspective/bias</th>
<th>Age level appropriateness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>Content</td>
<td>Accuracy/validity of object</td>
</tr>
<tr>
<td>Date of publication</td>
<td>Location</td>
<td>Accuracy/authenticity of</td>
</tr>
<tr>
<td>Currency/timeliness</td>
<td>Relevance to problem/question</td>
<td>bibliographic data</td>
</tr>
<tr>
<td>Scope</td>
<td>Genre</td>
<td>Inclusion of table of contents</td>
</tr>
<tr>
<td>Title</td>
<td>Ease of use</td>
<td>Inclusion of index</td>
</tr>
<tr>
<td>Author</td>
<td>Comfort of use</td>
<td>Availability</td>
</tr>
<tr>
<td>Format</td>
<td>Annotation</td>
<td>List of related topics/references</td>
</tr>
<tr>
<td>Author's reliability</td>
<td>Call number</td>
<td>Edition</td>
</tr>
</tbody>
</table>
This is an interesting list because it contains both commonly expected elements such as author, title, and subject and attributes that library catalog records rarely provide.

One way to think about the information you need to record about an object is to identify and understand the user tasks that the information in the representation must support. The report, Functional Requirements for the Bibliographic Record prepared by a study group of the International Federation of Library Associations (1998), identified four user tasks that data in a library catalog record must support:

- Using the data to find materials that correspond to the user's stated search criteria (e.g., in the context of a search for all documents on a given subject, or a search for a recording issues under a particular title)
- Using the data retrieved to identify an entity (e.g., to confirm that the document described in the record corresponds to the document sought by the user, or to distinguish between two texts or records that have the same title)
- Using the data to select an entity that is appropriate to the user's needs (e.g., to select a text in a language the user understands, or to choose a version of a computer program that is compatible with the hardware and operating system available to the user)
- Using the data in order to acquire or obtain access to the entity described (e.g., to place a purchase order for a publication, to submit a request for the loan of a copy of a book in a library's collection, or to access online an electronic document stored on a remote computer).

Thus, a complete bibliographic record should have sufficient data to support these tasks. It's important to realize that searching is only one of the tasks involved! Perhaps the most interesting, and the most problematic, is the user task of selecting or evaluating. Certainly some of the pieces of information you identified in the survey would support the selecting function, even if you were not able to search on, for example, scope or relevance.

**Summary**

This module highlighted two factors that should drive the choice of a representation for an information object: the characteristics of the object itself, and the needs of the users. As one deals with different formats of materials and types of objects, those characteristics vary. Similarly, different user groups have differing requirements for the information they need about an object to support their tasks. And it's important to realize that the same user may have different user tasks depending on his/her information need.

Thus, the decisions about the content of representations must take into account the multiple factors listed here. Further, you can begin to see that no single representation will ever be the right one for everyone, and it's possible to envision that the same object can be represented using different representation schemes.

**Cites & sites**